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TWO NEW MYRMECOPHILÆ FROM THE UNITED STATES.

BY LAWRENCE BRUNER, WEST POINT, NEBRASKA.

Before describing these interesting little crickets which have been neglected or overlooked so long in this country, it becomes necessary to enter somewhat into details. The group being one not often written upon, or the specimens often met with, they are therefore rare to collections. Prior to this account but two authentic notices of their capture in the United States have appeared, viz., the one referring to a specimen taken in Georgia by H. K. Morrison, and the other a reference to the present described species, one from the vicinity of Washington, D. C., and the other from the Pacific coast, at Portland, Oregon, the former of which is herewith figured (fig. 4), *a* representing the female, and *b* the male. This is undoubtedly the largest *Myrmecophila* known, being fully 4 m. m. in length, while the largest European species measures nearly one fourth less.

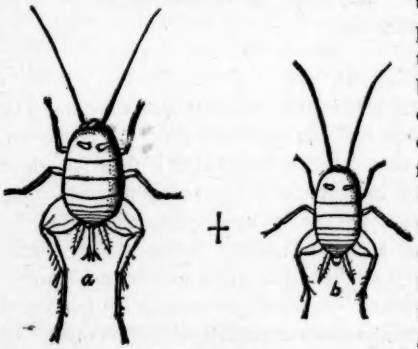

Fig. 4.

The habits of our two species, as far as known, agree well with those of the Orient. They are to be met with in the nests of various species of ants, and especially such as live in rotten stumps and logs or under stones in damp localities. Among these may be mentioned *Camponotus pennsylvanicus*, *Formica rufa*, and *Cremastogater lineolata*.

This being the first description of insects in this country belonging to the genus *Myrmecophila*, it would not be out of place here to give a short diagnosis of the genus before proceeding to the species.

Generic Characters of *Myrmecophila* :—

Body ovate, greatly convex, apterous. Occiput entirely hidden by the pronotum, vertex depressed. Eyes ocelliform. Furrows of the antennæ greatly impressed. Antennæ as long as the body, thickest at base, apex pointed. Pronotum large, wide, narrow in front, wide behind with the front and hind margins usually straight, lobes deflexed but not contracted. Meso- and meta-notum not differing from the segments of the abdomen except in some instances where they are wider. Anterior feet small, subcompressed. Anterior tibiæ without tympanæ, unarmed. Posterior femoræ greatly enlarged, dilate ovoid. Posterior tibiæ shorter than femoræ, stout, compressed, with the upper margin ciliate, internal margin with four movable spines, external margin with two spines, and with four long, terminal spurs. Abdomen short, greatly depressed, and attenuate or tapering. Cerci strong, as long as or longer than the abdomen. Ovipositor short and quite stout. The male differs from the female in its more slender form and its smaller size.

MYRMECOPHILA PERGANDEI, n. sp.

General form looking from above oval, smallest at the head. The latter depressed, deeply sunken into the front margin of the pronotum. Basal joint of the antennæ very large and globular, with a few short bristle-like hairs encircling the insertion of the second joint, remaining joints gradually decreasing in size toward the apex. Antennæ as long as body, pale yellowish at base, remaining portion rufous. Eyes small, black, composed of a group of ocelli-like cells, which are situated immediately behind the base of the antennæ—in dried specimens partly concealed by the front margin of pronotum. Anterior legs small, slightly compressed, unarmed. Posterior femora greatly enlarged, compressed, ovate incrassate ; tibiæ stout, also slightly compressed, shorter than femora, and furnished with four movable spines on the inner and two on the outer edge ; apex with four long spurs. Tarsi plain. Cerci stout, acuminate, slightly thickest in middle, as long as the abdomen, quite hairy ; a trifle heaviest in the male. Ovipositor slender and larger than usual, with the valves of equal lengths, as shown in the accompanying illustration (Fig. 4, *a*).

Pronotum large, wide and greatly deflexed ; narrow in front and wide behind ; front and hind edges straight. Meso- and meta-notum equal, much larger than first abdominal segment. Color, ochraceous and piceous. Front margin of pronotum and hind margins of thoracic and

abdominal segments, with apex of ovipositor, piceous brown. The characteristic feature of the species is, however, the two light colored elliptical markings upon the disc of the pronotum, as shown in the figure.

♀ 4 m. m. and ♂ 3.85 m. m. in length.

Habitat. Atlantic States, from Maryland southward.

MYRMECOPHILA OREGONENSIS, n. sp.

Elongate oval, body somewhat contracted at its junction with the pronotum, which latter is slightly narrowed at its posterior edge, making its sides appear bulging. It is a more slender species than the preceding, the female of this insect being very similar to the male of that species. Pronotum small, with the sides rounded, posterior edge very slightly arcuate; meso-, meta-notum and first abdominal segments equal. Cerci or anal stylets comparatively slender, 1.2 m. m. in length. Ovipositor 1.5 m. m. in length, medium stout, with the external sheaths slightly longest and pointed, with the points directed outward; internal ones acuminate. Color piceous brown above, with the under side and base of segments lighter. Antennæ concolorous. Disc of pronotum also light colored, but without the two elliptical spots, which are present in *M. Pergandei*.

Female 3 90 m. m. in length, male unknown.

One mature female and a pupa of this last species were collected at Portland, Oregon, in the summer of 1882, by Mr. Samuel Henshaw, of Boston, Mass. The types are deposited in the Museum of Comp. Anat., Cambridge, Mass.

OBITUARY NOTICE.

Mr. Anson Allen died at his home in Orono, Feb. 8, 1884, in the 55th year of his age. He was, without doubt, one of the best collectors, and one of the most careful, accurate and acute observers of insects, their habits and transformations, that we had among us. For a number of years past he spent nearly all the time he could spare from his business in collecting, breeding and exchanging Lepidoptera, and many collections, both in this country and Europe, have been enriched by additions from his exquisite preparations.

Mr. Allen would never save an insect unless it was absolutely perfect, except such as were very rare. For several years he bred from the eggs,

columbia, cecropia and many others in large numbers, and although he could not be prevailed on to publish his observations on the early stages of these moths, the conclusion he reached, that *columbia* is a good and distinct species, is worthy of careful consideration.

He corresponded with very many of our prominent Entomologists, and made extensive exchanges; and many, when they read these lines, will be pained to learn that he is with us no more.

Mr. Allen was one of the most unassuming of men, and was appreciated at his best only by those who knew him intimately. He did not confine himself to insects, but made a fine local collection in other departments of natural history.

C. H. FERNALD.

ADDITIONS TO CANADIAN LISTS OF COLEOPTERA.

BY W. HAGUE HARRINGTON, OTTAWA.

In a list which is now being published by the Ottawa Field Naturalists' Club, of Coleoptera collected in the vicinity of Ottawa, I have indicated a considerable number of species which appear not to have been hitherto included in our Canadian lists. As a record of these species may be of some interest to readers of the ENTOMOLOGIST who may not see the above mentioned publication, I send you a list in which I have also incorporated a few species (distinguished by an *) which, while already recorded, are of unusual rarity or interest. About twenty per cent. of my species are yet unnamed, and a vast amount of work remains yet to be done before the Coleoptera of this district can be considered as satisfactorily known.

CARABIDÆ.

**Blethisa quadricollis* Hald. Two specimens taken under driftwood on shady shore of the Ottawa, in June.

Clivina americana Dej. Common, and the only species found.

Dyschirius hispidus Lec. Taken in swampy meadow.

Pterostichus diligendus Chd. Rare, under driftwood.

Amara exarata Dej. Two or three specimens only.

polita Lec. Rare, under stones.

Platynus propinquus, Gemm. Rare, in damp pastures.

Cymindis borealis Lec. In dry pastures, in July.

Brachynus americanus Lec. Common under stones along the river, with *perplexus* Dej. and *medius* Harris.

Having had but little opportunity for the collection of water-beetles, my species are not numerous, and I can say little as to their relative rarity or abundance. As soon as the ice melts I will endeavor to gain a fuller knowledge of our Hydroporini and allied tribes.

DYTISCIDÆ.

Hydroporus hybridus Aubé. Not rare in the Ottawa in May and Oct.
dichrous Mels. One specimen.
americanus Aubé. One specimen.
notabilis Sharp. One specimen.

HYDROPHILIDÆ.

Helophorus obscurus Lec. (var.) One specimen.
Hydrochus rufipes Mels. Common.
Hydrobius feminalis Lec. One specimen.
Cercyon pygmæum Ill. Rare.

SILPHIDÆ.

Hydnobius substriatus Lec. One specimen in October. Dr. Leconte informed me that this beetle was exceedingly rare.
Liodes geminata Horn. In fungus.

SCYDMÆNIDÆ.

A large number of beetles belonging to this, and to the following three or four families, as well as species from many other families, were secured from moss and swamp grass collected in several localities immediately before the setting in of winter. Although I have only four species belonging to the Scydmænidæ, one of these is considered by Mr. John B. Smith to be perhaps a new species.

Scydmænus n. sp.? Of same size as *fatuus* Lec., but easily separated from that species by its pale antennae and legs.

PSELAPHIDÆ.

Bryaxis Brendelii Horn. Rare.
puncticollis Lec. One specimen.
tomentosa Lec. Very rare.

STAPHYLINIDÆ.

Many of my species in this troublesome family are still undetermined, but there are a few to record, including some which are MSS. species of Fauvel (determined for me by Mr. John B. Smith).

Aleochara gracilicornis Fauvel MSS.

Oxypoda tenebrosa Fauvel.

Gyrophæna corruscula Er.

**Staphylinus cæsareus* Cederh. In "New Species of North American Coleoptera," Part I., Dr. Leconte described as *S. ornaticauda* a specimen of this beetle from Canada (collection of Mr. Uhler), locality not stated. Whether the species, which is a European one, has been since taken in Canada, I do not know, but it has been found at Detroit. The single specimen taken by me was captured on 2nd June last, under a log in very moist ground, at Billings Bridge, two miles from the city.

Philonthus niger Mels.

lætulus Say. Rare. Perhaps confused by our collectors with *blandus*. Occurs in Lower Peninsula of Michigan.

agilis (?)

quadricollis Fauvel MSS.

Dianous cærulescens Gyll. One specimen. This is also a European species, but is recorded from Lake Superior (as *D. chalybeus* Lec.)

Lathrobium rubripenne Fauvel.

Bryoporus cribratus Fauvel.

Mycetoporus lepidus Grav.

Trogophlœus nitellus Fauvel.

Geodromicus nigrita Mull. Occurs in Lower Peninsula of Michigan (= *Anthophagus verticalis* Say).

TRICHOPTERYGIDÆ.

Ptenidium evanescens Msh. One specimen from moss.

Nephanes lævisculus Matth. This minute species is apparently not rare in moss, and may be taken as so well described by Prof. Bell in ENTOMOLOGIST last year.

COCCINELLIDÆ.

Hyperaspis bigeminata Rand. Rare. This beetle is recorded from Lake Superior, Michigan and Buffalo among other places, and being so widely distributed, it seems strange that it is not in our lists.

Scymnus fraternus Lec.?

CUCUJIDÆ.

Læmophlœus convexulus Lec. Rare.

DERMESTIDÆ.

Dermestes bicolor Fabr. One specimen.
Cryptorhopalum ruficorne Lec. Rare.
Orphilus glabratus Er., var, Rare.

HISTERIDÆ.

Hister defectus Lec.
exaratus Lec.

BYRRHIDÆ.

Syncalypta echinata Lec. Very abundant a few years ago on the Parliament Buildings, but rarer of late.

DASCYLLIDÆ.

Scirtes orbiculatus Fabr. Several specimens of this pretty species were taken last summer, on weeds growing along a stream flowing through an old beaver meadow, but owing to the variety of plants growing intermingled, I cannot say on what species it occurred. Previously to last year only one specimen had been taken by me.
Cyphon collaris Guér. This species is rare, not more than half a dozen specimens having been captured.

(To be Continued.)

CERATOCAMPA (CITHERONIA) REGALIS, FAB.

BY JOHN HAMILTON, ALLEGHENY, PA.

In the first number of this volume one of your contributors, Mr. Clarkson, writing about *Citheronia regalis*, infers that the moth always appears about the end of May, regardless of the time at which the larva enters the earth, and that it is the habit of the pupa to work out of the earth and lay on the surface of the ground during the winter. The first statement is correct in a certain sense. The insect in question is not uncommon here, and I have had them in numbers. Take a larva captured the first week in August and another the last in September, and allow them

to pupate in the same box and to remain together—they will disclose within a day or two of each other; but whether at the last of May or at some other time, depends on the temperature at which they have been kept. Keep the pupa of the one taken in August at a temperature a few degrees lower than that of the September one, and it will disclose much later, perhaps about the time the offspring of the other are entering the earth. I had one pupa that did not disclose till June of the second year. The time of development seems to largely depend on the temperature that surrounds the pupa—a fact that is well known.

The coming of a pupa to the surface is the exception, and not the rule. Those of several other earth-inhabiting species do the same when the ground selected or forced on the larvæ is unsuitable. This occurs in nature as well as in confinement. Take two parts of sandy loam, such as is used by plasterers, and one part of black, friable soil from the woods; mix together, put, to the depth of eight inches, in a good sized tin or iron box, and when the larvæ disappear cover over with a layer of moss, and then no pupæ will come to the surface.

As soon as the pupa is fully formed it commences a series of gyrations that result in the formation of an earthy cell, roomy, much larger than itself and impervious to ordinary moisture. This prevents it from being crushed by the expansion of the surrounding earth by freezing, and also from shriveling up by the absorption of its moisture in time of drouth; or from drowning from excessive wet. In hard ground the larva cannot penetrate deeply, nor make a wide excavation, and in endeavoring to enlarge its narrow surroundings it wriggles itself to the surface, where it stands small chance to survive to the time of disclosure.

ENTOMOLOGICAL NOTES.

BY PH. FISCHER, BUFFALO, N. Y.

I have often read articles about keeping parasites out of cabinets, and have seen in many entomological papers different remedies suggested to keep them from destroying, in a very short time, even the largest collection. I will now add my own experience, and remedy which always proved to be efficient during my 14 years' collecting, in which time I have not even lost one specimen. It will especially prove of interest to the

beginner. In the first place I would advise all those who cannot afford a large cabinet with good fitting drawers, to go to any good joiner and have some boxes made after the following pattern: Take the lumber about three-sixteenth inch thick for top and bottom, for the sides quarter of an inch. Have the box about 15 inches long by 12 inches wide, and 4 inches thick outside measure, and shape it book form, the bottom and top a quarter of an inch projecting. That portion which represents the cover of the book is cut into lengthwise, so as to make two receptacles, each about two inches high. The back is made of three-quarter inch lumber, in the shape of the back of a real book, which is covered with some strong cloth or thin leather outside, and cloth inside, to act as hinges. The two parts will have to be constructed so that they will, by closing them, fold together about a quarter of an inch. Have this neatly covered and lined with a suitable soft material, and it will be a tight and handy box for any kind of insects. Before transferring insects in a new box, I put them on cork and expose them to a moderately hot oven, which I also invariably do with insects received through exchanges. After a certain time, say half an hour, I take them out, and they are placed in the box, in which is pinned a little sponge the size of a small nut, saturated with carbolic acid (crystallized), which has to be renewed every 6 or 8 weeks. Old cabinets infested with parasites, when once introduced, can be cleared by the same method, only that the drawer or box, before pinning back the specimens, also has to be exposed to the heat of the oven.

I promised you my further success in hatching Lepidoptera with artificial heat. Pupæ of *Hyperchiria io* taken to a warm room, 64–80 degrees, on Feb. 10, 1884, came out as follows:—

Feb. 24, one ♂ and one ♀.
" 26, one ♂.
Feb. 27, one ♀.
" 28, one ♂.
Mch. 1, one ♂.
" 3, one ♀.

Of the lot taken to the room on December 5, a ♀ of *T. polyphemus* hatched on Feb. 16, depositing 142 eggs within three days, commencing laying the first night; eggs, of course, were sterile.

BRIEF NOTES OF A TRIP TO POINT PELEE, WITH ADDITIONS TO OUR LIST OF CANADIAN BUTTERFLIES.

BY THE EDITOR.

During the summer of 1882, we paid a flying visit to Point Pelee, in company with some friends who were interested in Botany. This point of land extends directly south into Lake Erie, near the eastern boundary of the County of Essex, and is among the most southerly points in the Province of Ontario. On the west side of the Point the land is chiefly marsh until near the extremity, and is a prolific hunting ground for sportsmen in search of water-fowl; it is also a breeding place for millions of Neuropterous insects. The east shore is sandy, and between this and the marsh are several farms and a considerable area of uncultivated arable land more or less covered with woods.

We reached Essex Centre, on the Canada Southern Railway, the nearest point of access by rail, at 7 p. m., on the 28th of June, where we hired a vehicle and driver for three or four days, and drove that evening over an excellent road 18 miles to Leamington. The night was spent here and an early start made the next morning for the Point. A drive of about three miles brought us to the base of the Point, and after a journey of about eight miles farther, we reached the upper extremity.

The day was warm and pleasant, and during the last portion of this drive we saw more Dragon-flies and other Neuropterous insects than we had ever seen in our lives before; they literally swarmed everywhere, especially in sunny spots. They flew in our faces and buzzed about our ears as we were driving, and settled on our clothing in considerable numbers. After catching all that could be conveniently carried, we amused ourselves by swinging the net in different directions, catching a few dozen and then letting them fly again. Among the most numerous species were *Libellula basalis*, *L. trimaculata*, *L. exusta*, *Diplax intacta*, and *D. rubicundula*, with some others undetermined. During the drive there also floated past us on rapid wing several specimens of *Papilio cresphontes* and one or two *P. marcellus*, but they flew with the prevailing wind directly over the swamp, where pursuit was impracticable. As we passed a sunny spot in the woods, approaching the end of our journey, a small dark-colored insect was seen hovering about some flowers growing

by the road-side, which from its peculiar jerky flight, was evidently a *Thecla*. A brief chase resulted in its capture, when it proved to be *Thecla smilacis* Boisd., = *auburniana* Harris, never before, to our knowledge, recorded as occurring in Canada. As we approached the extremity of the Point, we left the swamps behind us and with them the multitudinous hosts of the larger Neuropterous insects, but several of the smaller species were present, associated with Dipterous insects, in prodigious numbers, flying in clouds from every tree and bush we touched, the vibration of their many wings causing a loud roar or buzz. The sides of houses and barns were so thickly covered with them as to almost hide the wood they rested on, but they did not venture inside the buildings.

The next day was unfavorable for collecting; the rain poured in torrents until early in the afternoon. As soon as it had ceased, we wandered several miles along the sandy roads and shores, and found many interesting plants and trees, but there were very few insects on the wing, excepting those belonging to the Neuroptera, which were everywhere in abundance. Late in the afternoon, while beating about among the bushes on the sand hills on the eastern shore, a yellow butterfly started up which at first was thought to be a pale *C. philodice*, but there was something unusual about its appearance and manner of flight which led us to pursue it until captured. Imagine our surprise when we found it to be a female specimen of *Terias Mexicana* Boisd.

In W. H. Edwards' Catalogue of Diurnal Lepidoptera, *Thecla smilacis* Boisd. is said to be found in the Atlantic States, Mississippi Valley and Texas, while the localities given for *Terias Mexicana* are Texas to Arizona; California, occasionally in Kansas and Nebraska.

Since both these butterflies are new to our Canadian lists, we append descriptions of them.

Thecla smilacis is thus described by Boisduval: "Upper side blackish brown, with a pale whitish spot near the middle of the costal edge; the secondaries have two thin tails as in the analagous species.

"Under side greenish, often washed with a little reddish, with a transverse whitish ray sinuous on the primaries, tortuous on the secondaries, bordered in front by a ferruginous tint. Between this ray and the base, the secondaries have another short transverse sinuous ray of the same color. The extremity is marked by two or three ashy crescents, of which the intermediary is black in front, and the third in a line with two or three

small ferruginous spots, more or less distinct. The anal palette is black, and near the fringe there is a small white marginal line.

"Larva, which feeds on *Smilax*, is green, with the head and feet blackish. It has four rows of red spots, of which the two dorsal are formed of smaller spots, and one on each side composed of spots somewhat larger.

"Chrysalis grayish-brown, with the abdomen more clear and reddish."

Harris, who regarded this species as distinct from *smilacis*, thus describes it under the name of *auburniana*, and Harris' description agrees more closely with the specimens captured by us than does that of Boisduval. Harris says: "The outermost of the tails of this insect is very short, and often nothing remains of it but a little tooth on the edge of the wing. It varies considerably in color; the females are generally deep brown above, but sometimes the wings are rust-colored or tawny in the middle, as they always are in the males; the oval opaque spot which characterizes the latter sex is ochre-yellow. Upon the under side the wings in both sexes are green, the anterior pair tinged with brown from the middle to the inner edge; externally next to the fringe they are all margined by a narrow wavy white line, bordered internally with brown; this line on the fore wings does not reach the inner margin; on the hind wings it consists of six spots arranged in a zigzag manner, and the last spot next to the inner margin is remote from the rest; besides these there are on the same wings three more white spots bordered with brown between the zigzag band and the base; and between the same band and the margin three black spots, behind the middle one of which is a rust-red spot with a black centre. The wings expand from 1$\frac{3}{10}$ to 1$\frac{1}{10}$ inch. This pretty species is found on the mouse-ear *(Gnaphalium plantagineum)* in May, and on the flowers of the spearmint in August."

"*Terias Mexicana* Boisd. Boisd. Spec. Gén. 679. Figured on pl. 3, C. fig. 1, of Boisd. Spec. Gén.

"Wings brilliant citron yellow; primaries with a black border at the extremity, rather wide, ending squarely at the internal angle, showing near the middle a rather deep quadrangular sinus; the outer edge slightly sinuate, and whitish; secondaries, with the middle of the exterior edge prolonged to a prominent angle, in the form of a tail; a black border of moderate width, a little dentated on its internal side, not reaching the

internal angle; costal edge washed with orange yellow, mingling with the ground color.

"Under side of the primaries pale citron yellow, with a black central point, the edge intersected with brown points; the outer edge reddish near the fringe.

"Under side of secondaries yellow, sprinkled with ferruginous atoms, with a blackish central point; edge intersected with ferruginous points, and marked near the external angle with a spot of the same color; the posterior half having four or five other spots of the same color, of which two or three are in a line, and tending to form a transverse band; the middle of the outer edge more or less washed with ferruginous.

"Female differs from the male in the upper side being yellowish white, with a wider border, the quadrangular sinus more profound; the anterior edge of the secondaries widely orange yellow, and below, three ferruginous posterior spots form on the secondaries a narrow, transverse, ferruginous band.

"Texas—Louisiana—Mexico."

Among the other insects taken were *Papilio cresphontes*, *P. turnus*, *P. troilus*, *Colias philodice*, *Terias lisa*, *Argynnis cybele*, *Phyciodes tharos*, *Pyrameis huntera*, *P. atalanta*, *Anchyloxypha numitor*, *Pholisora catullus*, *Eudamus tityrus*, *Eudryas grata*, *Leucania unipuncta*, *Lucanus lentus* and *Macrodactylus subspinosus*. The latter species was very common on the flowers of the tulip tree *(Liriodendron tulipifera)*, which was then blooming freely; also on the sour gum or Pepperidge tree *(Nyssa multiflora)*.

The next morning we started early on our return journey and reached Essex Centre in time to take the afternoon train home. Had the weather been favorable we should doubtless have reaped a much richer harvest.

THE HAIRY LARVÆ AND THEIR PARASITES.

BY FREDERICK CLARKSON, NEW YORK CITY.

It is generally acknowledged by Entomologists that the hairy larvæ, such as the Arctians and their allies, very commonly escape parasitic attack, a circumstance attributable to the fact, that in order to permit the deposit of ova, these caterpillars must be discovered by the parasites in favorable postures, or else worried by them into such, that the spines separating, give the only opportunity for the insertion of the ovipositor.

This was clearly demonstrated in an attack made by an Ichneumon upon a larva of *Apatela Americana* Harris, which came under my observation in the early part of last autumn. This genus belongs to the family of the Noctuidæ, the larvæ of which, like the Arctians, are clothed with dense spinular hairs. The caterpillar had secured itself by its abdominal legs to the midrib of a maple leaf, having the fore part of its body elevated, similar to the attitude common to the larvæ of the Sphingidæ. The parasite displayed great energy in the effort to deposit, seemingly as if to compel the caterpillar to change its position, but as the caterpillar remained immovable for many minutes, probably a quarter of an hour, I was led to the conclusion that it realized its security in the position it had taken. After driving the parasite away, I discovered that the caterpillar, though perfectly life-like in form, was dead, and as hard as if petrified, and that the parasite, guided, as it would appear in this case, solely by sight, had been, like the Entomologist, thoroughly deceived. In view of the commonly accepted opinion, that insects are attracted by odor, not only to their own food, but to the proper food for their progeny, whether it be animal or vegetable, I have referred to this incident, as contributing to the theory that the parasite, in providing food for its progeny, seeks it by sight; for it would seem most improbable that a dead and dried caterpillar should retain a sufficiency of its natural odor to attract. The incident also illustrates, by the mode of attack and the prolonged effort at oviposition, that the caterpillar must be brought into an attitude favorable for the reception of the egg. I am inclined to the opinion that the reduction of these moths through the instrumentality of parasites, is largely effected while in the pupa condition, having noted this peculiarity of habit during our recent extraordinary visitation of the *O. leucostigma* Smith. The full grown larvæ of this species, collected by me, developed into moths, while from cocoons gathered it was not uncommon to obtain parasites. The cocoons of the hairy larvæ commonly consist of loose interwoven hairs, and are not so dense but that the pupa is readily discoverable by the parasite, even if the cocoons themselves do not attract them.

LARVA OF DOLBA HYLÆUS?

BY W. HAGUE HARRINGTON, OTTAWA.

On the 29th July last, while beating along the margin of a small stream, I found on my net a larva which had apparently fallen from an alder-

bush and which was unknown to me. I took it home, but it refused to feed upon alder, and I was unable to identify it and find out upon what to feed it. The only descriptions I had at hand were those of Mr. Reed in Annual Report for 1881, and no one of these seemed to answer. Finding that it refused every plant which I offered to it, and yet did not seem prepared to pupate, I put it in spirits, which, however, so discolored and shrivelled it that I threw it away. While it was alive I made the following brief note of its appearance: Light green, whitish on back, covered all over with white dots edged with black, but these most conspicuous on thoracic segments and substigmatal surfaces. Head granulated, margined by yellow and black line. Legs pink, stigmata orange fawn-color. Seven oblique white lines edged with rose and black, the last line prolonged to the caudal horn, which is long and slightly curved, with black sides and rough. It was my intention when jotting down this memorandum (to assist me in identifying the larva) to make a more full and minute description, which unfortunately I neglected to do. Recently in reading in *Psyche* the descriptions of larvæ of Sphingidæ, I came across one (Vol. II., page 77) which immediately recalled to me the larva I had taken in the summer. It is the description of a larva considered to be probably that of *Dolba hylæus*, and of which the food is sweet fern. The principal points in the description of the mature larva are as follows: Head scabrous; sphingial bands yellow or white edged with crimson, and this crimson often followed above by a narrow margin of black; horn black on the sides, with slight lateral yellow stripe, green above and beneath; the whole body profusely sprinkled with circular white dots having a black areola; spiracles testaceous, afterwards bright reddish, prolegs light brown. On turning to Mr. Reed's paper I find for this species: "Head green, with a pale blue line on each side; body pea-green with lateral oblique pink bands edged below with white; caudal horn crimson." (Abbot and Smith.) My object in sending this note is to find out whether it is now definitely known that the larva answering to these descriptions is that of the species to which it is referred. The moth has not been taken here yet so far as I know. I found last summer several other species in early stages, but did not attempt to rear them. Among them was one less than an inch long taken on button bush; thoracic segments lessening to head, which was small; general color pale green; covered all over with minute prickles or granules; horn very long and prickly.

TO OUR MEMBERS.

Ottawa, April 7, 1884.

Gentlemen: Having been honored by the Council of the Entomological Society of Ontario by being nominated as the delegate to represent that Society at the approaching meeting of the Royal Society of Canada, I shall feel obliged if any members who are desirous of availing themselves of the privilege extended by the Royal Society of having papers read before that learned body, will correspond with me without delay, so that I may make the necessary arrangements.

I would also draw attention to the last clause of No. 11 of the Regulations of the Royal Society, by which it is intimated that the Royal Society will receive suggestions from associated Societies on any matters in which the Royal Society may be of assistance in carrying out the objects of the Society. It was under this clause that your delegate last year brought before that Society the advisability of having a more liberal interpretation of the postal laws regulating the transmission of natural history specimens between students in Canada and those in the United States and Europe, and also suggested that the Government should be petitioned to allow scientific bodies to import free of duty all illustrations, etc., needed for their publications. I am, gentlemen,

Yours very truly,

J. FLETCHER, V. P. Ent. Soc., Ont.

LIST OF DIURNAL LEPIDOPTERA COLLECTED IN THE NORTH-WEST TERRITORY AND THE ROCKY MOUNTAINS, DURING SEASON OF 1883, WITH LOCALITIES.

BY CAPT. GAMBLE GEDDES, A. D. C. TO LIEUT.-GOVERNOR OF ONTARIO.

(Continued from Vol. xv., Page 223.)

93. Argynnis Leto ♀, Behr. Fort Macleod.
94. " Bellona, F. Fort Ellis.
95. Lycæna Fulla, Edw.
96. " Melissa, Edw. Oxley Ranche.
97. " Neglecta, Edw. Fort Ellis.

98. Lycæna Lygdamas, Doubld. Fort Ellis.
99. " Icaroides, Bd. Red Deer River.
100. Pamphila Nevada, Edw. (?) Fort Macleod.
101. " Colorado, Scud. Medicine Hat.
102. " Idaho, Edw. Moose Jaw.
103. Phyciodes Camillus, Edw. Edmonton.
104. " Marcia, Edw. Edmonton.
105. " Nycteis, Doubld. Edmonton.
106. Argynnis Nevadensis, Edw. Calgarry.

LIST OF ZYGÆNIDÆ AND BOMBYCIDÆ TAKEN AT ORONO, MAINE, AND VICINITY.

BY MRS. C. H. FERNALD.

ZYGÆNIDÆ.

Alypia octomaculata, Fabr. Rare.
" Langtonii, Coup. 1 ex.
Eudryas unio, Hübn.
Scepsis fulvicollis, Hübn.
Ctenucha virginica, Charp.
Lycomorpha pholus, Drury.

BOMBYCIDÆ.

Nola minuscula, Zell. Rare.
Argyrophyes nigrofasciata, Zell. Rare.
Clemensia albata, Pack.
Crambidia pallida, Pack.
Hypoprepia fucosa, Hübn.
Lithosia bicolor, Gr. 1 ex.
Euphanessa mendica, Walk.
Crocota rubicundaria, Hübn.
" quinaria, Gr. Rare.
" opella, Gr.
Utetheisa bella, Linn. Rare.
Callimorpha Lecontei, Boisd. Rare.
Platarctia borealis, Moeschl. 1 ex.
Arctia virgo, Linn.
" Saundersii, Gr.
" figurata, Drury. Rare.
" virguncula, Kirby.
Pyrrharctia isabella, A. & S.
Phragmatobia rubricosa, Harr.
Leucarctia acraea, Drury.
Spilosoma virginica, Fabr.
Hyphantria cunea, Drury. Spotted form, rare; pure white form, common.
Euchaetes egle, Drury.
" Oregonensis, Stretch. Very rare.
Halisidota tessellata, A. & S.
" caryæ, Harris.
" maculata, Harris.
Orgyia nova, Fitch.
" leucostigma, A. & S.
Parorgyia Clintonii, G. & R. Rare.

Parorgyia parallela, G. & R. Very rare.
Dasychira Lintneri, Gr. 1 ex.
Euclea querceti, H.-S.
Limacodes biguttata, Pack. 1 ex.
" fasciola, H.-S. Rare.
Packardia ocellata, Gr. 1 ex.
Tortricidia testacea, Pack. Rare.
Ichthyura inclusa, Hübn. Rare.
" albosigma, Fitch.
" vau, Fitch.
Datana ministra, Drury.
" integerrima, G. & R.
Nadata gibbosa, A. & S. Rare.
Gluphisia trilineata, Pack.
Notodonta stragula, Gr. Rare.
Lophodonta ferruginea, Pack.
" angulosa, A. & S. Rare.
Pheosia rimosa, Pack. Very rare.
Nerice bidentata, Walk.
Edema albifrons, A. & S.
Seirodonta bilineata, Pack.
Oedemasia badia, Pack. Rare.
Dasylophia interna, Pack. 1 ex.
Cœlodasys unicornis, A. & S.
Ianassa lignicolor, Walk. Rare.
Heterocampa marthesia, Cram.
Heterocampa cinerea, Pack.
" subalbicans, Gr.
Cerura occidentalis, Lintn. Rare.
Platypteryx arcuata, Walk.
Prionia bilineata, Pack. Rare.
Dryopteris rosea, Walk, Rare.
" irrorata, Pack. Very rare.
Actias luna, Linn.
Telea polyphemus, Cram.
Platysamia cecropia, Linn.
" columbia, Smith. Rare.
Hyperchiria io, Fabr.
Dryocampa rubicunda, Fabr. Rare.
Clisiocampa americana, Harr.
" disstria, Hübn.
Gastropacha americana, Harr. 2 ex.
Tolype velleda, Stoll. Rare.
Prionoxystus robiniæ, Peck. Very rare.
Hepialus argenteomaculatus, Harr. Rare.
Hepialus quadriguttatus, G. Very rare.
Hepialus mustelinus, Pack. Very rare.
Hepialus gracilis, Gr. Rare.

BOOK NOTICES.

Proceedings and Transactions of the Royal Socieiy of Canada.

The first volume of the Transactions of the above Society, covering the work done during the years 1882 and 1883, has been received. It is a handsome quarto volume of 720 pages, illustrated by 13 plates. The first 71 pages is devoted to an account of the Proceedings of the Society for the years 1882 and 1883; the remainder is divided into four sections —1st, French Literature, History, etc., occupying 165 pages; 2nd, Eng-

lish Literature, History, etc., 96 pages; 3rd, Mathematical, Physical and Chemical Sciences, 98 pages; 4th, Geological and Biological Sciences, 286 pages. The matter is well printed and on excellent paper, and the whole work—notwithstanding that the lists of *errata* are rather longer than they should be—is a credit to the country and an evidence of solid progress in scientific research in Canada.

Ottawa Field Naturalists' Club, Transactions, No. 4, 1882–1883; 8vo., pp. 89, with one plate.

This number, although somewhat late in being issued, is highly creditable to the Club, and shows that its members are still actively engaged in working up the natural history of their locality. Following the Report of the Council is the excellent and instructive address of the President, Mr. James Fletcher, who is also Vice-President of the Ent. Soc. of Ontario. Next in order are valuable papers on the Laurentian System, the Fishes of the Ottawa District, the Ducks of the locality, etc. There are also reports from the general branches of Geology and Mineralogy, Paleontology, Botany, Conchology, Ornithology, and Entomology, the last occupying six pages with the record of its excellent work. We heartily congratulate our fellow laborers in natural science belonging to this Club for the excellent example they have set their sister cities in Ontario by their thoroughness and enthusiasm.

The Butterflies of Maine; by Prof. C. H. Fernald. 8vo., pp. 104, illustrated with 28 figures.

Our thanks are due Prof. Fernald for a copy of this work, designed more especially for the use of students in the Maine State College, but one which will be found very useful to all who take an interest in our northern butterflies. In the introduction, which occupies 18 pages, brief reference is made to the classification, transformations, external and internal anatomy of insects, followed by an accentuated list of the names of butterflies and an artificial key designed to aid in determining the 59 species which are recorded as found in Maine. The descriptions are written in a plain and practical style, as free from technicalities as the subject will admit of.

Papilio: A Monthly Journal Devoted Solely to Lepidoptera.

This excellent publication, which has been so ably conducted for the past three years by Mr. Henry Edwards, of New York, has passed into the hands of Mr. Eugene M. Aaron, Curator of the American Entomological Society, Philadelphia, who will continue to publish it as heretofore.

The enthusiasm and ability Mr. Aaron brings to the task will, we have no doubt, enable him to fully maintain the good name this journal has already acquired. We sincerely hope that entomologists generally will aid this useful work by subscribing for it, and we trust that under Mr. Aaron's able management the career of *Papilio* may be an eminently successful one. Mr. Aaron's address is Lock-box 2,500, Philadelphia, Pa.

The Canadian Sportsman and Naturalist.

We regret to learn of the demise of this useful journal. Three volumes have been published, containing much valuable information concerning the natural history of Canada.

CORRESPONDENCE.

The Entomological Society of Washington has organized with the following officers: President, Dr. C. V. Riley; first Vice-President, Dr. J. G. Morris; second Vice-President, Geo. Marx; Recording Secretary, E. A. Schwarz; Corresponding Secretary, L. O. Howard; Treasurer, Ben. P. Mann; Executive Committee, the officers and Dr. W. S. Barnard, P. R. Uhler and Dr. A. J. Shafhart.

The first regular monthly meeting of the Society was held April 3rd, in the Council Chamber of the U. S. National Museum. The following papers were read:—

1. Some New Facts Concerning the late Townend Glover—C. V. Riley.
2. On Insect Collecting at Pt. Barrow, Alaska—Jno. Murdoch.
3. On the Insect Fauna of the District of Columbia—E. A. Schwarz.
4. On the so-called "Mistaken Parasite."—L. O. Howard.

The active membership list of the Society numbers over twenty names. Regular meetings are held on the first Thursday evening of each month.

L. O. Howard, Corresponding Secretary.

Change of Address.—The Rev. F. W. Fyles has removed from Levis, P. Q., to South Quebec. Parties sending him communications will please bear in mind this change.